TO: **Derek Robinson, HPNS BRAC Environmental Coordinator**
Department of the Navy
BRAC Program Management Office West
derek.j.robinson1@navy.mil

FROM: **Steve Castleman, Environmental Law and Justice Clinic, Golden Gate University School of Law, on behalf of Greenaction for Health and Environmental Justice**

RE: **Comments to the *Draft Final Parcel G Removal Site Evaluation Work Plan, Former Hunters Point Naval Shipyard, San Francisco, California, November 2018***

DATE: **March 15, 2019**

I. INTRODUCTION

On August 14, 2018, the Environmental Law and Justice Clinic of the Golden Gate University School of Law submitted comments to the *Draft Parcel G Removal Site Evaluation Work Plan, Former Hunters Point Naval Shipyard, San Francisco, California, June 2018* ("*Draft Plan*"), on behalf of Greenaction for Health and Environmental Justice ("Greenaction") and its members and constituents in Bayview Hunters Point, San Francisco, and throughout California.

During the comment period, Greenaction repeatedly asked the Navy to provide documents that were relied on by the *Draft Plan* but which were withheld by the Navy, such as the Sampling and Analysis Plan ("SAP"). We also asked that the public comment period be extended until 30 days after the missing documents were released, including by letter to Derek Robinson on August 13, 2018, attached as Exhibit 1. The Navy refused.

The Navy could have released the SAP during the comment period, or provided a longer comment deadline to the public; it simply chose not to. When was it released? The very next day! The comment period ended on August 14, 2018. Exhibit 2, a screenshot of BRAC's website shows

the date of the SAP is August 15, 2018.[1] It is abundantly clear the Navy could have released the SAP during the comment period and made a deliberate choice not to

In November 2018, the Navy released its *Draft Final Parcel G Removal Site Evaluation Work Plan* (*"Draft Final Plan"*). The Navy, however, again withheld indispensable information preventing public comment, this time on the single-most crucial decision in any cleanup: remediation goals. The Navy's deliberate withholding of this essential information is further evidence that the Navy refuses to take its public participation obligations seriously. Public comments are especially important to the Hunters Point Naval Shipyard ("HPNS" or "Shipyard") cleanup because the Navy's past failure to listen to residents of Bayview Hunters Point – including some with technical expertise – significantly delayed revelation of the radiological fraud committed by Tetra Tech, EC., Inc. ("Tetra Tech") and its massive impact on the cleanup.

II. COMMENTS TO THE DRAFT FINAL PARCEL G WORK PLAN

A. Preliminary Remediation Goals (PRG) Calculations

EPA requires that risk be analyzed and remediation goals be set by applying the latest Preliminary Remediation Goal ("PRG") calculations. It repeatedly asked the Navy to use the PRG calculators well before the June 2018 *Draft Plan* was released. For example, in its March 26, 2018 comment to the Navy's February 2018 *Draft Work Plan Radiological Survey and Sampling,* EPA wrote:

> **Section 4.1.1 (Release Criteria);** As part of the fourth Five-Year Review occurring in parallel this year, the Navy is performing updated risk evaluations of these existing Remedial Goals (RG's). EPA has previously recommended that this evaluation should use the current versions of the USEPA's Preliminary Remediation Goals (PRG) Calculator for soil and the Building PRG Calculator for buildings (BPRG). The new work performed under this Work Plan should use cleanup criteria that reflect findings of the updated risk evaluations to ensure the

[1] Like the sloppiness of the Navy's oversight of Tetra Tech, it cannot even be consistent; the Navy's response to the California Department of Public Health's General Comment to the *Draft Plan*, No. 47, states the SAP was released on August 16, 2018.

protectiveness of the cleanup. (Emphasis added.)

EPA reiterated its request in its August 14, 2018 comments to the Parcel G *Draft Plan*:

> **Section 3.3 and 4.3, Remediation Goals for soil and buildings, respectively:** These sections list the current ROD RGs. The HPNS's Five-Year Review occurring in 2018 is evaluating whether the current selected remedies, including these ROD RGs, are still protective and whether any changes are necessary to ensure continued protectiveness. Based on national practices directed by EPA headquarters, EPA expects this process to use the most current version of the EPA Preliminary Remediation Goal (PRG) Calculator and Building PRG Calculator to assess the ROD radiological RGs. The Work Plan should use only those cleanup goals confirmed through this analysis to be protective. (Emphasis added.)

In its transmittal letter to its August 14 comments, EPA also laid down an extraordinary inter-governmental gauntlet: "Without the requested changes, the approach will not provide the necessary confidence level to establish when Parcel G would be suitable for redevelopment, and EPA may invoke the dispute resolution process described in the FFA [Federal Facilities Agreement]." (Emphasis added.)

Despite EPA's adamancy, the November 2018 *Draft Final Plan* never once mentions PRGs! (The *Draft Plan* listed the PRGs once, in its table of abbreviations, though they are never mentioned in the body of the plan.) Rather than release the PRG calculations, the Navy continues to stonewall, deferring all discussion and analysis to the revised *Fourth Five Year Review*, which at the time of the *Draft Final's* release was projected to be by the end of November 2018. However, the *Fourth Five Year Review* still has not been released, more than three months later, continuing to leave the community in the dark about whether the Parcel G ROD's remediation goals ("RGs") remain protective of human health and the environment.

PRG calculations are not trivial details; they are the bedrock on which protectiveness rests. Yet the comment period on the *Draft Plan* opened and closed while the Navy withheld the PRG information. The Navy has since released a *Draft Final Plan,* also completely devoid of PRG calculations.

The Navy's hide-the-ball tactics are not limited to the Parcel G plans. Despite EPA's demands, the *Draft Fourth Five Year Review* was released in July 2018 also omitting any mention of the PRGs, prompting EPA, in its comments of September 21, 2018, to state:

> EPA has previously commented that this fourth FYR should include updated risk evaluations for existing remediation goals (RGs) using the current versions of the EPA's PRG Calculators, but this is not addressed in the FYR. For example, risk should be calculated for soil, buildings, piers, and bollards. Please revise the FYR to include the results of updated risk evaluations for existing RGs using the current versions of the EPA's PRG calculators to ensure that existing RGs remain protective. (emphasis added*). Section 6.2.2, Changes in Toxicity and Other Contaminant Characteristics*.

The comment period for the *Draft Fourth Five Year Review* opened and closed while the Navy withheld that information. The Navy is apparently about to release a revised, supposedly final draft of the *Fourth Five Year Review* without providing the public any information as to how the review addresses the PRGs or their impact on risk and protectiveness.

All these timing decisions were in the complete control of the Navy. As a result, it is reasonable to infer the Navy deliberately withheld any and all information about its handling of the PRGs in drafts of the *Parcel G Work Plan* and the *Draft Fourth Five Year Review* to prevent public scrutiny and comment.

In mid-November 2018, the Navy released a statement to the press indicating it had done at least some of the PRG calculations. An unlabeled table was attached to the release purportedly reporting results of PRG calculations for soil. The statement, which is attached as Exhibit 3, says:

> As part of the 5-year review process, the Navy evaluates past remedial actions to determine if they remain protective. Using current risk assessment procedures and guidance, past remedial action levels were confirmed to be protective in the 2018 5-year Review and are expected to be finalized in November 2018. The referenced EPA comments were accepted by the Navy and the EPA's Preliminary Remediation Goal (PRG) calculator was used to verify protectiveness of Navy remedial goals. (Emphasis added.)

This statement also appears on the Navy's website.[2]

[2] https://www.bracpmo.navy.mil/brac_bases/california/former_shipyard_hunters_point/timely_topics.html.

The part of the statement that does not appear on the Navy website is also troubling in the way it characterizes the PRG calculators. It says:

> The attached table gives examples of the Hunters Point radiological remedial goals and the EPA's PRG calculator. These calculations were completed and verified by health physicists with decades of training in evaluating radiological risk, and who understand the appropriate application and the limitations of the EPA's PRG calculator. (Emphasis added.)

The Navy's reference to "the appropriate application and limitations of the EPA's PRG calculator" is deeply concerning because it suggests modification of the PRG calculations and/or not including correct inputs. It is particularly troubling that the Navy may be inappropriately excluding or mischaracterizing inputs into the PRG calculations, especially relating to institutional controls. To address these concerns, the Navy must release the "arithmetic" of the PRGs – all assumptions, inputs and calculations – prior to finalizing the work plan for Parcel G.

Implausibly, the Navy's untitled table claims the current soil RGs are orders of magnitude too strict. Either the Navy's PRG calculations are dead wrong or it wasted hundreds of millions of dollars remediating to unjustifiably low remedial goals. Either way, the Navy's intentions and its competence are called into question.

The Navy has not released similar results for building PRG calculations, but based on the Navy's handling of the soil PRGs, it is reasonable to doubt the Navy's intention and ability to apply the PRGs for buildings properly.

It is also clear the Navy has no intention of changing its public-be-damned approach. At a meeting of the Mayor's Citizens Advisory Board's Environment and Land Use Committee on January 28, 2019, Derek Robinson repeatedly stated that the Navy will not release its PRG calculations to the public until *after* EPA approves them, precluding public comment on the calculations and their impact on the *Draft Final Parcel G Work Plan* and *Five Year Review*. A video of the meeting is incorporated herein as Exhibit 4 and is available at: https://drive.google.com/file/d/18uKJFaIxluKJQGIOIvGpMFWPN4sCMA2s/view. Mr. Robinson's

statements are time stamped between: 1:48:25 – 1:49:44 and 2:15:10 – 2:18:23. A CD containing the video will also be mailed to BRAC for inclusion in the record.

On February 13, 2019, Greenaction met with EPA, expressed our concerns about the handling of the PRGs, and inquired whether the Navy had yet transmitted its PRG calculations to EPA. EPA declined to comment. We also requested that EPA exercise its authority under Section 23.2 of the Federal Facilities Agreement and release the PRGs, to the extent EPA had them. To date, EPA has not responded to the request.

Greenaction has held off on commenting on the *Draft Final Plan,* expecting an opportunity to review and comment on the PRGs since last November. We are still waiting. Based on the sequence of events, there can be little doubt the Navy intentionally withheld its PRG calculations from public scrutiny and intends to continue to do so, compelling us to wait no longer.

PRG calculations, the basis for establishing remediation goals and protectiveness, are essential to providing a reasonable explanation of any plan to retest Tetra Tech's fraudulent work. Because the Navy intends to finalize the *Draft Final Plan* without providing a formal comment period regarding the PRG calculations, public comment has been a sham.

CERCLA and the National Contingency Plan ("NCP") establish *minimum* standards for community involvement. 55 Fed.Reg. 46, 8766 (March 8, 1990). Under CERCLA and the NCP, the extent to which the public is included in decision making should be site specific, taking into consideration community interest and complexity of the cleanup, among other things. Id. The interest of the community at Hunters Point is extremely high, as demonstrated by large crowds attending public meetings, multiple demonstrations by citizens' groups and ongoing front-page coverage of the radiological fraud and its aftermath in the news media. Community members and groups including Greenaction have vocally demanded documents and answers. Because the demonstrated community interest is so intense, the Navy should offer significantly more than the minimum level of involvement.

EPA policy states that effective community involvement "starts with a commitment to the principle that the public should be meaningfully involved in decision-making." *Superfund Community Involvement Handbook* (EPA 2016) at 101.

Yet the Navy has disbanded the Restoration Advisory Board and has ignored calls to reinstate it, cutting off one important avenue for public comment. Now it has cut off another: public comment. This is exceptionally inappropriate for the Shipyard cleanup as the extraordinary public interest in the fraud and re-remediation calls for more, not less, public participation.

Although the Navy affirmatively offered a public comment period as to the *Draft Plan,* that offer was a hollow gesture without the PRG calculations. This contravenes the NCP which calls for the lead agency not only to furnish technical details of cleanup, but further that technical details be explained adequately enough for the general public to understand the complicated issues involved and encourage meaningful dialogue. Id.; 55 Fed. Reg. 46, 8766. By engaging in a comment process that excludes the most important decision, the Navy is acting inconsistently with CERCLA, the NCP and EPA policy and denying the public the right to fully participate in the comment process initiated by the Navy.

To fulfill its obligations to the public and to comply with the EPA guidance the Navy must recirculate the work plan and open a new formal comment period after it has fully and completely released its PRG calculations to the public. The Navy must not subvert CERCLA.

B. The Navy Has Improperly Changed the Remediation Goals

The *Draft Final Plan* refuses to acknowledge that the Navy is unilaterally and improperly changing the remediation goals RGs.

The Navy clearly indicated in the *Draft Plan* its intention to significantly weaken the radiological RGs. But instead of saying so, the Navy buried the change in a single footnote to a table.

The Parcel G ROD's Table 5, "Remediation Goals for Radionuclides," indicates in footnote "d" (soil/residential): "All radiologically impacted soils in this parcel will be remediated according to Residential Remediation Goals." There is a specific exception for radium in footnote "c," which explicitly adds background to the RG. This exception is conspicuously absent for any other radionuclide of concern.

The *Draft Plan*, however, changed the RG to add background levels to all RGs, not just radium, significantly watering them down. Table 3-5, misleadingly called, "Soil Remediation Goals from Parcel G ROD," states in footnote "a" that "[a]ll RGs will be applied as concentrations *above background*." (Emphasis added.) The *Draft Final Plan* repeats this footnote verbatim in its Table 3-5, though the ROD never contemplated or authorized adding background levels to RGs.

The *Draft Plan* did not even attempt to justify this significant alteration to the remediation goals. Neither does the *Draft Final Plan*. Nor did the Navy respond to Greenaction's August 14, 2018, comments on the issue, as required.

The Navy did respond to EPA's comments to the *Draft Plan* but its response contradicts both the *Draft* and *Final Plans,* which added background to the RGs. The Navy's response states: "**Changes to the cleanup levels are not proposed for this project.**" (Bold and underline in the original.) Navy Response to EPA General Comments, No. 3. This assertion is reiterated more specifically as to the RGs in General Response No. 9: **"RGs are not proposed to be changed as part of this work plan."** (Bold in the original.)

It is apparent the Navy intends to change the RGs while simultaneously denying it. If the Navy makes this arbitrary and scientifically unsupported change, and if the regulatory agencies go along, it will be an improper end-run around the CERCLA requirements for

amending a ROD, a direct violation of the ROD, a direct violation of the Federal Facilities Agreement and a direct violation of CERCLA. The Navy is required to use the RGs approved in the ROD until it has done proper, publicly-vetted PRG calculations and, if necessary, go through the proper procedures to amend the ROD and obtain regulatory approval.

Finally, as stated immediately below, if "background" samples are taken from the shipyard, a completely indefensible choice, they will skew high, owing to historical practices, further improperly weakening the cleanup standards established by the ROD.

C. Background Sampling

The *Draft Final Plan* continues to contemplate taking some soil background samples on the Shipyard. The Navy should rethink this approach, as it ignores the community's knowledge of the Shipyard practices.

The Historical Radiological Assessment ("HRA") is demonstrably inaccurate and should be revised to take into account what the Navy has long ignored – the experiences of the people who once worked at the Shipyard.

Past shipyard operations were not neatly compartmentalized and documented, as the Navy asserts. The HRA is almost exclusively based on documents describing the radiological work done at the Shipyard, the location and materials used. But the Navy did not keep records of its waste-handling practices. No one documented people dumping radioactive liquids into the sanitary sewer system, but it was heavily contaminated nonetheless.

Similarly, radioactive sandblast grit from ship decontamination after the Operation Crossroads nuclear tests was uncontained and scattered in the wind across the shipyard. No one kept records of this but the absence of records documenting dispersal of windblown radioactive sandblast grit is not an indication it did not happen. To the contrary, former shipyard workers tell a consistent story of widespread sandblast grit dispersal. The Navy would know if it had only asked the workers.

But the Navy has never been interested in the testimony of former Shipyard employees of the Navy base, just as it has ignored the whistleblowers Greenaction has brought forward detailing the depth and breadth of fraud the Navy would rather conceal.

Radioactive sandblast grit was but one of the sources of shipyard-wide contamination. Another was the 60,000 gallons of radioactive fuel that was burned at HPNS, emitting radioactive smoke from the incinerator's smokestack which, like the sandblast grit, scattered across the shipyard on the wind.

Former workers overwhelmingly agree the Shipyard must be considered radiologically contaminated until proven otherwise, the direct opposite of the Navy's working assumption.

Because there was widespread scattering of radiologically contaminated wastes, it is entirely inappropriate to use any soil samples taken from the Shipyard to investigate background levels of radiation. It is simple common sense to exclude potentially contaminated areas from background sampling, let alone this Shipyard, where there is significant evidence of widespread radiological contamination.

D. The Statistical Soil Sampling Model Ignores the Probable Presence of Discrete Radioactive Devices

In Greenaction's comments to the *Draft Plan*, we pointed out that fully excavating and scanning soil from only one-third of the sewer excavations in Phase I was wholly inadequate. Subsequent new facts have come to light substantiating our criticism.

In September 2018, a radioactive "deck marker" was found in Parcel A despite the Navy having maintained for decades the parcel was never radiologically impacted.[3]

As the Declaration of Elbert Bowers, attached as Exhibit 5, attests, he learned a similar radioactive object was discovered in post-scanned, supposedly "clean" soil that was obviously improperly scanned – even cursory scanning should have easily identified the object. The soil came

[3] Greenaction also brought forth eyewitness and documentary evidence that the Parcel A sanitary and storm water sewers contained elevated radiation which should have been investigated but never was.

from a Shipyard sewer project contracted out to Shaw Environmental & Infrastructure ("Shaw") in Parcel D-1. However, all Shaw's excavated soil from Parcel D-1 was scanned by Tetra Tech in accord with a *Memorandum of Understanding* between the two companies, attached as Exhibit 6. Finding a radioactive object in post-scanned soil demonstrates Shaw's soil was just as fraudulently scanned as Tetra Tech's. Additional discreet radioactive objects are reasonably foreseeable, if not likely.

The Navy is relying on a statistical model to demonstrate that if the one-third of soil that is to be fully excavated and scanned does not exceed the remediation goals, there will be sufficiently high confidence that the remaining two-thirds are equally as clean. However, the model does not account for discrete radioactive objects in the soil such as were found in Parcel A and in the Shaw sewer project's soil scanned by Tetra Tech.

The statistical model cannot demonstrate that the two-thirds of soil that is not fully excavated and scanned is free of discrete radioactive objects like deck markers which have been found in places on the Shipyard where the Navy claimed they could never be. Neither can boring samples as contemplated in Phase II. We reiterate that 100% of the soil from the sewer projects must be excavated and scanned, rendering Phase II unnecessary. Without 100% scanning, the Navy will be unable to live up to its promises to redress Tetra Tech's fraud, and it will be unable to certify protectiveness.

III. CONCLUSION

The Navy has deliberately frozen the public out of participating in the most crucial decisions made in the *Draft Final Plan*. It should not flaunt public participation but rather welcome it.

The Navy must release all PRG data and reopen the *Draft Final Plan* to public review and comment. Further, since the Navy deliberately withheld information like the PRG calculations during

the public comment period, the Navy must respond to all comments in writing, as would have been required had the Navy not intentionally prevented meaningful comment.

Respectfully submitted,

Steve Castleman

Environmental Law and Justice Clinic
Golden Gate University School of Law
Attorney for Greenaction for Health and
Environmental Justice

DRAFT PARCEL G WORK PLAN SUPPLEMENTALCOMMENTS

EXHIBIT LIST

Exhibit 1: Letter from Geenaction counsel to to Derek Robinson, August 13, 2018

Exhibit 2: Screenshot of part of BRAC website, March 15, 2019

Exhibit 3: Statement of Derek Robinson and table purportedly showing PRG calculation results, October 30, 2018.

Exhibit 4: Video of Citizens' Advisory Committee meeting, January 28, 2019

Exhibit 5: Declaration of Elbert Bowers, March 14, 2019

Exhibit 6: Shaw–Tetra Tech Memorandum of Understanding, October 7, 2010

EXHIBIT 1:

Letter from Geenaction counsel to to Derek Robinson, August 13, 2018

August 13, 2018

Derek Robinson, HPNS BRAC Environmental Coordinator
Department of the Navy
BRAC Program Management Office West
derek.j.robinson1@navy.mil

RE: Formal Request For Delay in Closing of Comment Period to the *Draft Parcel G Removal Site Evaluation Work Plan, Former Hunters Point Naval Shipyard, San Francisco, California, June 2018*

Dear Mr. Robinson,

By this letter, Greenaction for Health and Environmental Justice requests that the closing of the comment period for the *Draft Parcel G Removal Site Evaluation Work Plan, Former Hunters Point Naval Shipyard, San Francisco, California,* June 2018, be extended.

The Navy's failure to release documents that are essential to understanding the Draft Work Plan precludes the public from reviewing and commenting on the entirety of the plan. The most egregious example is the Navy's withholding of what Marvin Norman estimated in an email to me to be 4-7 Sampling and Analysis Plans (SAPs).

The SAPs are essential to understanding the re-sampling program because crucial subjects have been deferred to them: "The SAP provides additional guidance on soil sampling, chain-of custody, laboratory analysis, and quality assurance (QA)/quality control (QC) requirements." (p. 3-4). Any "additional guidance" about such essential matters as sampling, chain-of-custody and QA/QC must be provided to fully analyze the plan. It doesn't include the granular detail that the plan itself acknowledges is in the SAPs.

Similarly, the Work Plan states, "The analytical methods and the radionuclides being analyzed for will be presented in the SAP and are summarized in Table 3-6." (p. 3-6) But when one looks at Table 3-6, it lists no analytical methods. Rather, the paragraph before the table says gamma surveys "will be performed using detector systems equipped with gamma spectroscopy," without identifying any such systems. Presumably, the SAPS will specify which systems will be used, specifics we do not have access to and are precluded from commenting on.

Likewise, page 3-8 of the Work Plan states, "The laboratory instruments used to analyze the soil samples and the associated standard operating procedures (SOPs) for calibration, maintenance, testing, inspection, and QA/QC are discussed in the SAP." How are we to comment on these topics absent the details of how the analyses will be done and how QA/QC requirements will be met?

Among other things, the Work Plan defers: soil samples which "will be submitted to the offsite analytical analysis according to the SAP" (p.3-8); "systematic and bias samples will be containerized, labeled, and analyzed, as described in the SAP" (p. 3-15); "soil samples will be containerized and submitted to offsite laboratory with appropriate chain-of custody documentation as established in the SAP" (p3-15); "samples will be identified, labeled, and cataloged according to the SAP" (p. 3-19); "corrective action reports, data validation reports, quality assurance management reports, and assessment reports are discussed in the SAP" (p. 4-4). (emphasis added in each case).

These are but a few of the details deferred, there are more examples.

Perhaps the most important is: "Analytical data validation will be performed by an independent third party as described in the SAP. Data validation will be performed on all TU/SU data and all RBA data" (p. 5-1). Since data validation goes to the very heart of proving that, unlike in the past, the data aren't falsified, it is imperative that we be given the information necessary to comment on the adequacy of the data validation plans. And since the Navy's efforts to verify Tetra Tech's data found substantially less questionable data than the EPA review identified, the data validation details are necessary to assure the plan contains procedures for resolving different interpretations of the same data.

We must be able to review all the information deferred to the SAPs to exercise our right to comment, particularly if there are 4-7 different SAPs.

As we are precluded from commenting on the SAPs and how they will be incorporated into the Draft Work Plan, the Navy has failed to provide "sufficient information as may be necessary to provide a reasonable explanation of the proposed plan and alternative proposals considered," as required by 42 U.S.C. §9617.

Another essential document that is not readily available on BRAC's website, incredibly enough, is the Parcel G ROD. Since the whole purpose of resampling is to demonstrate whether soils and buildings are compliant with the ROD, it must be available to evaluate the Draft Work Plan. Additionally, the plan cites five Tetra Tech documents as references, none of which is available.

Because these crucial documents are not available, the comment period must be extended to at least 30 days after the Navy releases all those documents, particularly the SAPs.

Thank you for your attention to this matter. Please contact me to discuss it.

EXHIBIT 2:

Screenshot of part of BRAC website, taken March 15, 2019

Radiological

February 2017 Radiological Program Fact Sheet
April 2015 Radiological Program Fact Sheet
August 2014, Radiological Program Fact Sheet, 446 kb
April 2006, Final Basewide Radiological Removal Action, Action Memo Revision 2006 - PDF, 4.5MB
August 2004, Final Historical Radiological Assessment, History of the Use of General Radioactive Materials, 1939-2003 - PDF, 48MB

Parcels D1, D2 UC1, and G

2018, 2013, 2009, & 2008

Parcel D1, D2, UC1, and G

October 2018 Parcel G Work Plan Fact Sheet
October 2018, Frequently Asked Questions Parcel G Work Plan
October 2018 Parcel G Radiological Re-testing
[illegible]
[illegible]
February 2013, Final Remedial Action Completion Report for Parcels UC-1 and UC-2 - PDF, 2.7MB
February 2013, Fact Sheet: Completion of Remedial Action at Parcels UC-1 and UC-2 - PDF, 249 kb
February 2009, Draft Record of Decision for Parcels D-1 and UC-1 - PDF, 2.3MB

- Attachment A: Applicable or Relevant and Appropriate Requirements - PDF, 566 kb
- Attachment B: Responsiveness Summary - PDF, 537 kb
- Attachment C: References - PDF, 464 kb
- Attachment D: Administrative Record Index - PDF, 484 kb

February 2009 Records of Decision for Parcel G
July 2008, Parcel D Proposed Plan - PDF, 4.31MB

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Parcels E, E2 and UC3

2018, 2017, 2013, 2009, 2014, & 2008

Parcel E, E2 and UC3

[illegible]

EXHIBIT 3:

Statement of Derek Robinson and Table Purportedly Showing PRG Calculation Results, by email of October 30, 2018

Steven Castleman

From: [redacted]
Sent: Tuesday, January 22, 2019 4:05 PM
To: Steven Castleman
Subject: Fwd: Hunters Point Report
Attachments: Soil PRGs Example.pdf[redacted]

Jason OK'd my sending this to you.

Begin forwarded message:

From[redacted]
Subject: FW: Hunters Point Report
Date: October 30, 2018 at 3:17:02 PM PDT
To:[redacted]
Cc:[redacted]

[redacted]here is the Navy's response. Thoughts?

On 10/30/18, 3:08 PM, "Franklin, William D CIV NAVFAC HQ, BRAC PMO" <william.d.franklin@navy.mil> wrote:

[redacted]our response to your query is below. Please attribute the statement to Mr. Derek Robinson, environmental clean-up coordinator for the Navy at Hunters Point. R, Bill

"The Navy's first priority in its Base Realignment and Closure cleanup work at Hunters Point is human health and safety. We stand by our existing clean-up goals at Hunters Point, (which are some of the most conservative in the BRAC program and) have been confirmed by expert review across multiple regulatory agencies to be protective of human health. While different methodologies can be used to calculate goals and risk, the Navy has consistently evaluated EPA risk criteria, leveraged their expert guidance in our calculations, and we work together toward the same goal of ensuring that the property is suitable for transfer and reuse by the City of San Francisco.

As part of the 5-year review process, the Navy evaluates past remedial actions to determine if they remain protective. Using current risk assessment procedures and guidance, past remedial action levels were confirmed to be protective in the 2018 5-year Review and are expected to be finalized in November 2018. The referenced EPA comments were accepted by the Navy and the EPA's Preliminary Remediation Goal (PRG) calculator was used to verify protectiveness of Navy remedial goals.

The attached table gives examples of the Hunters Point radiological remedial goals and the EPA's PRG calculator. These calculations were completed and verified by health physicists with decades of training in evaluating radiological risk, and who understand the appropriate application and the limitations of the EPA's PRG calculator. We appreciate the efforts of Mr. Hirsch and his former students to investigate the Navy's clean-up program but encourage a sound and educated approach to evaluating radiological risk."

Radionuclide	Navy Remedial Goals (RGs) for Soil (pCi/g)	2018 EPA Preliminary Remedial Goal (PRG) Calculator 1E-04 Risk (pCi/g)
Cesium-137	0.133	2,580
Plutonium-239	2.59	388
Radium-226	1.0	110
Strontium-90	0.331	1,340
Thorium-232	1.69	477
Uranium-235	0.195	27.7

EXHIBIT 5:

Declaration of Elbert Bowers, March 14, 2019

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GREENACTION FOR HEALTH
AND ENVIRONMENTAL JUSTICE

UNITED STATES NUCLEAR REGULATORY COMMISSION

Before the Executive Director for Operations

GREENACTION FOR HEALTH AND ENVIRONMENTAL JUSTICE, **Petitioner,** **v.** **TETRA TECH EC, Inc.,** **Licensee.**	**DECLARATION OF ELBERT BOWERS IN SUPPORT OF SUPPLEMENTAL COMMENTS TO THE PARCEL G DRAFT FINAL WORK PLAN, Hunters Point Naval Shipyard, San Francisco, California**

I, **ELBERT BOWERS**, state:

1. I started working on the radiological cleanup at Hunters Point Naval Shipyard ("HPNS") in January 2001, as an employee of New World Environmental ("NWE"), a radiological subcontractor to Tetra Tech. I became NWE's Radiation Safety Officer Representative ("RSOR") in January 2004. On March 30, 2009, after Tetra Tech invoked use of its own NRC materials license for the first time rather than use NWE's, I "rolled over" from working for NWE to working directly for Tetra Tech as its RSOR, with Navy approval.

2. The first maxim of radiological cleanup is that one should assume a site which is radiologically impacted is contaminated until demonstrated otherwise. Based on the decades long experience in the nuclear industry that has qualified me to be an RSOR, all of Hunters Point Naval Shipyard should be considered radiologically contaminated unless there is proof to the contrary.

3. In my role as Tetra Tech's RSOR, I participated in drafting a Memorandum of Understanding ("MOU") between Tetra Tech and, among other companies, Shaw Environmental & Infrastructure ("Shaw"), another contractor engaged in radiological remediation at HPNS. The MOU related to the handling of soil excavated by Shaw from sewer lines in Parcel D-1. Under the agreement, all such soil was transferred from Shaw to Tetra Tech for radiological screening by Tetra Tech personnel at Tetra Tech's Radiological Survey Yard No. 2 ("RSY-2"). All soil transfers were to be memorialized in transfer-of-custody documents. A copy of the MOU is attached as Exhibit 2.

4. Subsequent to Tetra Tech's scanning at RSY-2, custody of the soil was transferred back to Shaw. Radiologically-impacted soil was then transferred by Shaw to a licensed transportation company, Environmental Management Services ("EMS") for disposal at a licensed low-level

radioactive waste disposal facility. Non-radiologically impacted soil was used for backfilling the trenches from which the soil from the sewer project originated, including any associated with Parcel D-1. Prior to such backfilling, the soil was stored on site awaiting final results of an independent off-site laboratory analysis and approval from RASO for the soils' final disposition. After RASO approval, non-radiologically impacted soil was backfilled by Shaw into the trenches from which it originated. Attached hereto as Exhibit 3 is an aerial photo of a portion of HPNS, depicting the location of RSY-2 and the areas Shaw used to store soil after scanning by Tetra Tech and before final clearance from RASO. Piles of soil are clearly visible in the designated areas.

5. The Petition in this matter describes fraudulent soil scanning by Tetra Tech personnel at RSY-2, directed by Jane Taylor, a woman hired for the position of Senior Health Physics ("HP") field lead despite having submitted a fraudulent resume indicating significant training and experience as an HP when, in fact, she had none.

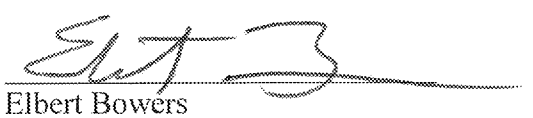
6. I was informed and believe that the Shaw-excavated soil that was taken to RSY-2 for scanning by Tetra Tech under the direction of Jane Taylor was subject to the same fraudulent scanning as was done on Tetra Tech-excavated soils for projects independent of Shaw.

7. Billy Vo was a Shaw Senior HP at the Shipyard. I was familiar with him because he had worked for NWE before moving over to Shaw. Vo, and others who learned of the following events but kept it quiet to protect their jobs, admitted to me later the following incident. Vo was with a Shaw junior HP. The junior HP asked Vo to show him how to operate a radiological scanner in the field, which Mr. Vo possessed and had experience with. Vo showed the junior HP some of the basics in the use of a Ludlum radiological detection field instrument and then let the

junior HP give it a try. Vo and the junior HP were in an area of HPNS that had been trenched and remediated by Shaw Environmental. The soil that had been used to fill the trench came from the Tetra Tech-managed RSY-2 pad that Jane Taylor directed. The junior HP, while conducting a walk-over scan of the freshly placed trench backfill, observed that radiation readings on his instrument suddenly jumped off scale (or "pegged out") due to the area's radiation levels being so high. When further investigating the source of the high radioactivity, Vo and the junior HP discovered what proved to be an "old generation radium button" of the kind used by the military decades earlier throughout HPNS. Radiation emissions coming from the button were so excessively high, in the milli-Rem-per-hour [mR/hr] range, that the Ludlum sensor being used was inappropriate for accurate measurement. A more appropriate monitoring device was obtained so precise assessment of the highly elevated readings could be made. Finding a highly radioactive button such as the one discovered in this incident in soil that was supposed to have been previously scanned and remediated by Tetra Tech indicates that the soil was not properly scanned or remediated.

I declare under penalty of perjury that the foregoing is true.

Executed on March 14, 2019 in San Francisco, California..



Elbert Bowers